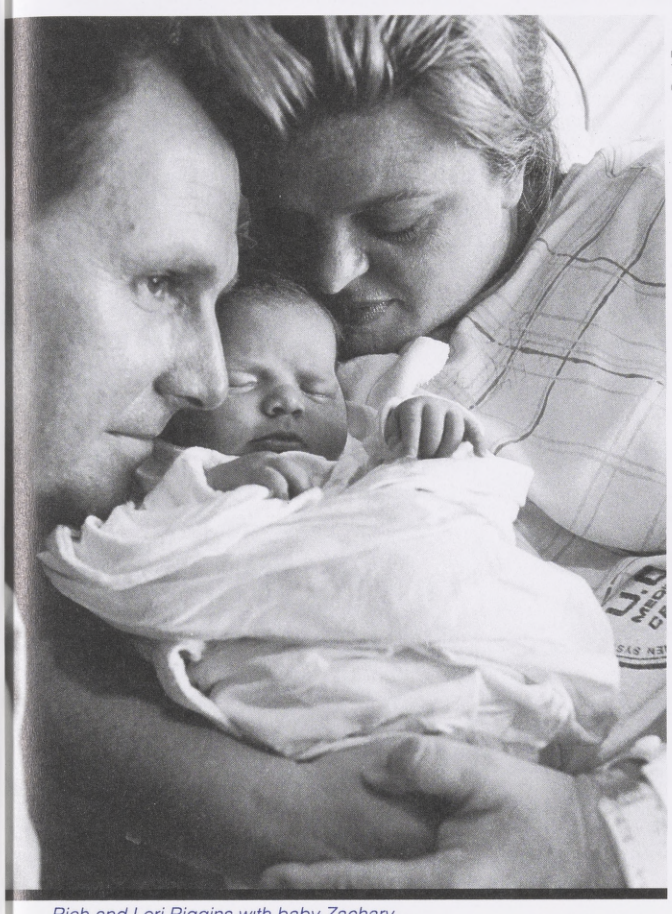
July/August 1993 Volume 18, Number 4

A summary of recent news stories from the University of California, San Francisco

UCSF

News for You

Pioneering Gene Therapy Tried on UCSF Baby with Rare Disease



Paul Fusco

Rich and Lori Riggins with baby Zachary

In a pioneering approach to treating genetic disease in infants soon after birth, 9 lb. 9 oz. Zachary Riggins of Exeter, California, born at UCSF, has undergone gene therapy using cells taken from his own umbilical cord blood. The procedure was carried out for the first time in collaboration with the National Institutes of Health in virtually simultaneous efforts at UCSF and Children's Hospital of Los Angeles.

One newborn at each institution has now received treatment for severe combined immunodeficiency caused by the absence of an enzyme — called adenosine deaminase (ADA) — that is crucial to maintaining the body's immune system. This rare, genetic disorder renders the body totally helpless against infectious disease.

"If this approach is effective, then it could be applied to newborns with many other genetic diseases, such as beta thalassemia and sickle cell anemia," says Diane Wara, MD, the UCSF pediatric immunologist who is overseeing treatment of the UCSF baby.

The gene therapy treatment involved inserting a genetically engineered ADA gene into the baby's stem cells extracted from the cord blood, then returning these treated cells back to the baby in a simple procedure similar to a blood transfusion. Stem cells, which originate in the bone marrow, give rise to all blood cells, including many that are vital to the immune system. One type of white blood cell made by the stem cells is the T-lymphocyte, which is destroyed by the buildup of abnormal waste products in patients with ADA deficiency.

Study Challenges How Smokers Who Quit Gain Weight

One of the chief reasons smokers continue to light up is that they are afraid that they'll gain weight once they stop. And the reason that they're likely to gain weight, some scientists have believed, is that cigarettes create a metabolic effect that leaves smokers with "hungry" fat cells when they quit, driving their bodies to produce and store more fat.

But that thinking is challenged in a new study by UCSF researchers at SFGH, who found that there is no metabolic magic that causes people to gain weight when they quit the smoking habit.

"You gain weight after stopping smoking because you burn fewer calories or eat more, not because smoking cessation has some peculiar effect on your cells to make them produce or store more fat," says Marc Hellerstein, MD.

The study also offers an explanation of how smoking contributes to "bad" cholesterol, putting people at greater risk of heart disease. The researchers found that smoking leads to a significant release of fatty acids into the bloodstream, a metabolic process called lipolysis. These fatty acids are converted by the liver into triglycerides, which can lead to higher levels of the so-called "bad" cholesterol, LDL, and lower levels of the "good" cholesterol, HDL.

Motorcycle Helmet Law Saves Lives



The California law requiring motorcyclists to wear helmets saved 92 lives and $86 million in lost productivity in 1992 alone, estimate UCSF researchers. "In addition to the human toll, motorcycle deaths impose a multimillion dollar societal burden on Californians each year," says UCSF medical economist Wendy Max, PhD, "but the costs have been reduced greatly since the state's mandatory helmet law went into effect on January 1, 1992."

According to California Highway Patrol data, 327 motorcyclists died in the state in 1992 compared to 512 in 1991 — a 36 percent decrease in fatalities in 12 months. The helmet law can be credited with about half of this reduction in deaths, says Max, a researcher at the Institute for Health & Aging and the School of Nursing's Department of Social & Behavioral Sciences.

The UCSF report was presented in May in Los Angeles with other studies by UCLA researchers and the California Highway Patrol on the effect of the mandatory motorcycle helmet law.

Max and co-researchers used a methodology based on national studies of helmet effectiveness and California data on helmet usage among fatalities to arrive at their estimate of lives saved by the helmet law. They estimate the price tag of lost productivity due to early motorcycle-related deaths at $297 million in the year after the helmet law compared to $470 million in 1991. They calculate that $86 million of the total $173 million difference was due to lives saved by motorcycle helmets.

In Brief

Teens Still Reluctant to Use Condoms

Even though high school students are getting the message that unprotected sex means high risk for contracting AIDS and other diseases, they still are reluctant to use condoms, according to a new study by UCSF researchers led by Jonathan Ellen, MD.

"Our results show teenagers are knowledgeable and realistic about sexually transmitted diseases, which contradicts a widespread belief that they view themselves as invulnerable to the world around them and are difficult to educate about risk," says Ellen, an adolescent medicine fellow. "The finding is important because it establishes adolescents as a rational group about STDs. With this as a baseline we can develop informational programs that are more effective in encouraging condom use."

Big Construction Project Begins in July

A major construction and renovation project will begin at UCSF beginning the first week of July. It is part of a $30 million project to renovate the space where the old library used to be. It is funded primarily through bonds California voters approved June '92 through Proposition 153. During construction, which will last through the end of the year, visitors to the campus will be able to obtain a map from the Medical Sciences Information Desk to help them get around more easily. There should be little, if any, impact on patient care areas. For further information, call Community Relations at 476-3206.

Grief Study

UCSF researchers are looking for people whose spouses have died within the last five months to participate in a study of the grieving process. Directed by psychiatrist Mardi J. Horowitz, MD, the study will look at healthy and unhealthy personality adjustments that occur during grieving. For further information contact Virginia Herrera at 476-7608.

PMS Management Study

Women between the ages of 18 and 45 who experience severe premenstrual syndrome are invited to participate in a UCSF study funded by the National Institutes of Health. The goal is to determine the effectiveness of a non-drug program for relieving PMS symptoms. All treatment is free. For further information contact Diana Taylor, PhD, in the School of Nursing, 476-4377.

Can Growth Hormone Make Older People Stronger?

At age 70 most people are only about half as strong as they were at 35. Some evidence links this loss of strength to declining levels of growth hormone in the blood as people age.

If you are at least 70 years old you may be eligible to participate in a study to determine whether growth hormone treatment can improve muscle strength in older people, potentially helping them remain active and independent. The study is being conducted by Maxine Papadakis, MD, at the San Francisco VA Medical Center. For further information, call the study nurse — Mary Jo Tierney — at 750-1291.

More News for You
on the back page

What's happening

July/August 1993
A bimonthly calenda
events at UC San Fr

Special Events

Sponsored by Arts & Performances unless otherwise noted.



Fri., July 9
The Spirit of '29. A "Plaza Pulse" free lunchtime concert featuring Depression-era music. Plaza Grill, 500 Parnassus. Noon. Call 476-2542.

Wed., July 14
Music in the Library Recital Series. Florante Aquilar and Alan Tower perform classical and modern guitar pieces. $3/5. Lange Reading Rm., UCSF Library, 530 Parnassus. 5:30 p.m. Preceded by wine and cheese reception at 5 p.m. Call 476-2542.

Breast Cancer Screening

Women can have low-cost mammograms — X-rays to screen for breast cancer — from a mobile van that travels to convenient Bay Area locations. The procedure takes approximately 20 minutes and costs $60. Your physician's approval is required, plus his/her full name, address & telephone number to assure results are mailed promptly. Appointments must be made at least one month to six weeks in advance. Find out when the van will be in your neighborhood by calling 476-2193 between 9 a.m. and 3 p.m., Monday through Friday. A $50 mammography screening also is available at the UCSF/Mount Zion Medical Center Radiology Department. Call 885-7710.

Personal Safety

The following presentations are available by appointment to groups in the community or at your workplace:

Crime Prevention. Presented by UCSF Police Department. Call 476-5683.

Self-Defense Classes & Sexual Assault Prevention Education. Presented by UCSF Rape Prevention Education Program. Call 476-5222.

Survivors Support Group. Looking at how sexual assault can affect day-to-day life. Sponsored by Rape Prevention Education Program. Twelve consecutive sessions. $5-$25. Call 476-5222 for class dates, time, location and registration.

At the Heart of It

At the Heart of It, a cardiac support group for heart patients experiencing fear, anxiety, confusion & stress, is facilitated by a cardiac social worker and a registered nurse. Meets at UCSF/Mount Zion, 1600 Divisadero. For further information call 885-7227.

Recreation & Fitness

Millberry Fitness Center offers a great variety of summer classes & workshops to the community including self-hypnosis, massage, self-care & aerobics. Call 476-1115 for more information & a free brochure.

Mount Zion Community Meetings

A series of meetings to keep the community apprised of activities of interest and to listen to neighborhood concerns. Held the fourth Tuesday of each month. Next meetings — July 27 and August 24. Herbst Hall, UCSF/Mount Zion, 1600 Divisadero. 7 p.m. Call 476-3206.

Lakeside Senior Center Lectures

Free lectures held on Wednesdays at 10 a.m. at Lakeside Presbyterian Church, corner of Eucalyptus & 19th Ave., near Stonestown. Call 586-8600.

July 7
Coping with a Confused Older Adult.

July 21
Prostate Cancer: Testing & Treatment.

July 28
Who Will Make the Decisions? Discuss who will make decisions about your life, your care & your money when you're not able.

Aug. 4
Treat Yourself to Beauty Therapy.

Aug. 18
Swim for Health.

Aug. 25
Restoring Your Health Through Rehabilitation.

Women's Programs

Events sponsored by the Women's Resource Center unless otherwise noted. Call 476-5222.

Sat., July 10
Basic Home Repair: Electrical. Women Empowering Women tradespeople teach how to wire switches & outlets, how to repair wires & plugs on vacuums, lamps & more. $45-$60. Rm. 517, Nursing Bldg., enter through 521 Parnassus. 9 a.m.-4 p.m.

Thurs., July 15
Sa-I-Gu: From Korean Womens' Perspectives. Video & discussion exploring the experiences of Korean-American women, particularly the shopkeepers who suffered during the riots in Los Angeles last year. Toland Hall, 533 Parnassus. Noon-1 p.m.

Tues., July 20
Dating Rites: Gang Rape on Campus. Video & discussion of gang & date rape from the victim's & perpetrator's points of view. Sponsored by Rape Prev. Educ. Prog. Toland Hall, 533 Parnassus. Noon-1 p.m.



Sat., July 24
Basic Home Repair: Plumbing. Women Empowering Women tradespeople teach how to repair leaky faucets, unclog drains & much more. $45-$60. Rm. 517, Nursing Bldg., enter through 521 Parnassus. 9 a.m.-4 p.m.

Thurs., Aug. 12
A Forgotten Epidemic: The Era of Illegal Abortion. Video & discussion of "When Abortion Was Illegal: Untold Stories." Toland Hall, 533 Parnassus. Noon-1 p.m.

Outdoors Unlimited

Outdoors Unlimited is a cooperative resource center for outdoor recreation and adventure, serving both the UCSF campus and the general public. It provides skills training, equipment rentals, trip planning information and a place to meet others with similar interests. For more information or to receive a quarterly listing of trips and clinics, call 476-2078.

Tues., July 27
Welcome to Outdoors Unlimited. Learn all about OU, who makes it happen & how to become a part of it all. OU Rental Cntr., 633 Parnassus. 7:30 p.m.

Various dates
Full Moon Paddle. These gentle paddles from Sausalito to Tiburon and back are a great way for first-time paddlers to experience sea kayaking. Call for details.

Institute of Healing Arts & Sciences

All talks are free and held on Fridays at noon in Rm. 1364, Medical Sciences Bldg., 513 Parnassus. Call Marie Lehrer at 584-4416 for details.

July 9
Othobionomy™. A gentle & effective way to reestablish ease & vitality.

July 16
Celebrating a Return to Earth: Birth in Indigenous Aboriginal, Tibetan, Basque, Balinese & Navajo Cultures.

July 23
The Hidden Cures for Cancer & AIDS in Africa.

July 30
The Sweetheart Search. Learn how to have fun while finding your special friend or lover.

Aug. 6
Satan As Adversary & Adversity. Jungian exploration of "the shadow" that opposes conscious will.

Aug. 13
Healing Foods.

Aug. 20
The Secret Doctrines of the 21st Century. Practical theosophy & its role in the coming years.

Aug. 27
International Medicine: A New Model for Health Care.

Multiple Helpers Outreach Network Support Group. For victims & survivors of violent trauma. Ages 15 & over. Meets on Tuesdays from 10 a.m.-noon and on Wednesdays from 1-3 p.m. in Rm. A222, Langley Porter Psychiatric Institute, 401 Parnassus; and from 7-10 p.m. in Rm. 517, Nursing Bldg., enter through 521 Parnassus. For further information call the helpline at 759-7923, 7 a.m.-10 p.m. daily.

Campus Tours

All tours are free and take place at 1 p.m. on Tuesdays, July 6, 13, 20, 27 and August 3, 10, 17, 24 and 31. Those interested may meet in the lobby of Medical Sciences, 513 Parnassus. For further tour information call 476-4394.

AIDS Programs

Sponsored by UCSF AIDS Health Project. For more information call 476-3902.

Living with HIV Public Forums. Call for schedule.

Individual Risk Assessments & Referrals. By appointment. Free.

Positives Being Positive. Anonymous support groups in the community for people who have tested HIV positive but have not developed symptoms of AIDS.

Other Support Groups. Drop-in & eight-week facilitated groups for men & women with AIDS or HIV infection, in a risk group or otherwise affected.

Cole Hall Cinema

Cole Hall Cinema will be closed July through September, with plans to re-open in October. The auditorium will be receiving a new entrance and marquee as part of a larger construction project taking place July 1993 through January 1994. (See news item this issue.) Thank you for your patience. Call 476-2542 for more information.

Blood Donation

Tues., July 13
Campus Blood Drive. Blood may be given at the Millberry Conference Center, 500 Parnassus. 8 a.m.-2 p.m.

You don't have to wait for a blood drive to give blood. You may donate any weekday, 10 a.m.-8 p.m., or Saturday, 10 a.m.-3 p.m., at UCSF's Blood Donor Center, Rm. 131 Long Hospital, 505 Parnassus. For information & appointments call 476-6989.

Art Exhibits

Through Aug. 31
Oils by Sherri Sugarman. On display at the Faculty/Alumni House, 745 Parnassus. Open weekdays or by appointment. Call 476-4723.

Hospitals Auxiliary Art Exhibit. On display in the lobby of Moffitt/Long Hospitals, 505 Parnassus, during July will be Hispanic-American prints, calligraphy & art photos. The August display will feature prints & monotypes. A portion of all proceeds benefits patients at the Medical Center at UCSF. To purchase or reserve work, visit the Auxiliary Office, Rm. 182, Moffitt Hospital, 505 Parnassus, 9 a.m.-4 p.m., or call 476-4906.

Volunteer Orientation

Program to acquaint prospective volunteers with opportunities available in the Medical Center at UCSF. Held in Langley Porter Psychiatric Institute Auditorium, 401 Parnassus (P), and at UCSF/Mount Zion in Herbst Hall, 1600 Divisadero (MZ). For further information call 476-1196 (P) or 885-7353 (MZ).

Tues., July 6, 5-7:30 p.m. (MZ)
Wed., July 21, 5-7:30 p.m. (MZ)
Tues., Aug. 3, 5-7:30 p.m. (MZ)
Tues., Aug. 17, 9-11:30 a.m. (MZ)
Tues., Aug. 31, 5-7:30 p.m. (MZ)

Great Expectations Programs for Parents

The UCSF Birth Center offers special classes & video presentations for expectant parents on Wednesdays in Rm. 326, Ambulatory Care Center, 400 Parnassus. 7-8:30 p.m. Call 476-MOMS for registration & information. Also call for details about San Francisco Mothers of Twins Club.

July 21
Being a Parent: Sharing Your Life with a Baby. Video presentation of "2 a.m. Feeding."

Aug. 18
Labor Support & Medication During Childbirth. Video presentation of "Birth Through the Father's Eyes."

Cancer Referral Hotline

The UCSF Cancer Referral Service enables cancer patients to place just one telephone call to learn the names and telephone numbers of UCSF doctors specializing in the kind of treatment they need. Call 1-800-888-8664.

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Brown Bag Lectures

A series of free lectures held weekly at noon on Wednesdays in Rm. 300, Health Sciences West, enter through 513 Parnassus (P); monthly on Thursdays in Rm. 125, UCSF Mission Cntr. Building (MCB), 1855 Folsom; and monthly on Tuesdays in Herbst Hall, UCSF/Mount Zion (MZ), 1600 Divisadero. Call 476-4394.

July 7
The Father-Daughter Dance. How father-daughter relationships influence later male-female bonds. (P)

July 14
The Ill Effects of a Combat Zone. Living through a war is half the battle; the second half is healing from the experience. (P)

July 15
Carpal Tunnel Syndrome. (MCB)

July 20
The Heartbeat of America. Developments in diagnosis & treatment of coronary artery disease. (MZ)

July 21
Facial Aesthetics Surgery: Turning Back the Hands of Time. (P)

July 28
Advances in Fracture Management & Limb Deformity. (P)

Aug. 4
Management of Truncal Varicosity. Examination & treatment of varicose veins & venous disorders in the legs. (P)

Aug. 11
The Media & Science. (P)

Aug. 17
How to Invest Within a Budget. (MZ)



Aug. 18
Safe Sun. A commonsense approach to diminish the effects of sunlight on the skin. (P)

Aug. 19
Life Threatening Career Changes. Some techniques to make a career change a reality. (MCB)

Aug. 25
Can We Talk? Communication in the Workplace. (P)

Look Good, Feel Better

This program provides expert advice on make-up, wigs & the use of turbans to people who have undergone chemotherapy or radiation and have lost or are losing their hair. Held the first Monday of each month in the 11 Long Solarium, Long Hospital, 505 Parnassus. Co-sponsored by the American Cancer Society and supported by the Donna Smith Fund. Call 476-1383.

UCSF
University of California, San Francisco
Department of Public Affairs
513 Parnassus Avenue
San Francisco, CA 94143-0462

Digitally programmable hearing aids restored the richness and texture of sound — and left them in control.

Sound fades, the world shrinks.

Isolation. Depression. Diminished self-confidence. These are often the consequences for people who lose their hearing later in life.

Standard hearing aids help a lot. But they don't provide the full answer. People turn up their hearing aids to hear soft sounds — often normal conversation. And they jump to turn them down at sharp noises. Running water, crinkling paper, tinkling glass — these can sound like nails scratching a chalkboard when amplified through a hearing aid. At best, the sound is irritating; at worst, painful.

Constantly turning a hearing aid up and down becomes a nuisance in time. It's easier just to leave it down, and miss much of what's going on even though the result is similar to being in a foreign country where you know only a handful of words.

"You can't keep asking people to repeat themselves; it gets embarrassing," says Eleanor Siperstein. "So you begin to lose interest."

Eleanor started wearing hearing aids in both ears in her mid-fifties. She frequently fiddled with them, with unsatisfying results. In her Italian class, she could hear her teacher but not the comments of students sitting across the room. Sound distortion produced by the hearing aids also compromised the clarity and certainty of what she heard.

Her husband, Marvin, an endocrinologist at the Veterans Administration Hospital in San Francisco and a UC San Francisco professor of medicine, also had hearing problems as a result of aging. He, too, wore hearing aids in both ears.

Last December, the Sipersteins, both of whom are now in their sixties, traded in their old hearing aids for state-of-the-art models. They received their new hearing aids at UCSF's Division of Audiology.

The new devices, available in only the past few years, are digitally programmed. Digital programming allows for a much wider variety of options than conventional hearing aids. For that reason they must be custom tailored to each patient, a process that requires intensive testing and analysis of the specific hearing loss.

To program Marvin's hearing aid, senior audiologist Carole Shelton adjusted a series of toggles located in a remote control about the size of a pocket calculator. For Eleanor's, Shelton connected the hearing aids and remote control to a dedicated programmer, an electronic device that encodes the equipment with digital information.

Shelton programmed the hearing aids to compress sound waves at specific frequencies, based on the test results. By varying the amount of compression, Shelton could vary the amount of amplification at each frequency, or pitch, depending on the lowness of the incoming sounds. She can also reprogram the hearing aids if the Sipersteins' hearing loss increases.

The result of digital programming is that the hearing aids amplify soft voices, but dampen harsh noises — which simulates how a healthy ear responds to sound.

Digitally programmable hearing aids also improve sound clarity. That's important, because while people may talk loudly enough, they often garble their words.

The remote controls — Eleanor's resembles a pen — not only control volume. They also contain switches that incrementally filter out background noise. The filtering feature makes it much easier to understand conversation in a noisy room.

But thanks to the many programming options, Marvin's and Eleanor's hearing aids in effect work automatically. The Sipersteins often leave their remote controls at home. No more constant fiddling.

Eleanor now can hear almost everything that goes on in her Italian class. And Marvin can clearly hear what his patients tell him, and the responses of his students. "It's wonderful," Eleanor says of the new hearing aids. "I don't have to wonder anymore about what's going on." —Marshall Krantz

(For more information on digital hearing aids, call the UCSF Audiology Clinic at 476-5101.)



Tom Wachs

To Our Neighbors

July/August 1993

Digitally Programmed Hearing Aids

Baby with Rare Disease Undergoes Gene Therapy

What UCSF Study Says About the Motorcycle Helmet Law

UCSF

University of California, San Francisco
513 Parnassus Avenue, San Francisco, CA 94143-0462

More News for You

UCSF Awards $5,000 to SEP Student Winners

A team of Woodrow Wilson High School juniors who taught fifth graders about the dangers of cigarette smoking and an A.P. Giannini Middle School seventh grader who explained to elementary school students how the digestive system works won first prize in the sixth annual Science & Health Lesson Plan Contest. Each team was awarded $1,000 in first prize money, which will be shared with their teachers and schools.

First-place winners in the high school division were Neeraj Sharma, Solaria Perez and Sean O'Quin. First-place middle school winner was Raquel Cecilia Moreno.

Sixteen teams of middle and high school students were awarded a total of $5,000 for the contest, sponsored by UCSF's Science in Health Education Partnership (SEP) program in cooperation with the San Francisco Unified School District.

More than 300 middle and high school students entered the contest, designed to get students working in teams to experience the fun of science and to examine a subject in-depth by developing lessons for their classmates or younger students.

Bruce Cook



Marina Middle School seventh grader Joanna Xie (left) taught the Sherman Elementary fifth grade class of Richard Kim about the heart and exercise. Xie and her partner Jenny Lam were among five third-place winners of $100 in the middle school division.

"One-dose" Weapon Against Disease That Blinds Millions

UCSF and Egyptian researchers have found that just one dose of a new antibiotic may offer a potent new weapon against trachoma, an eye infection that has blinded as many as nine million people in developing countries.

Some 80 million children are among potential beneficiaries, says Chandler R. Dawson, MD, UCSF professor of ophthalmology and epidemiology and director of the UCSF Proctor Foundation.

Studying children with trachoma in two Egyptian villages, Dawson and his colleagues found that a single pill containing the new antibiotic "azithromycin" was as effective in clearing the infection as the currently used therapy — a months-long regimen of antibiotic ointment placed directly into the eyes.

"A single-dose antibiotic is a much easier approach than anything we've had," Dawson says, "and we now can consider treating entire communities at once." Eye ointments are difficult to apply and last only a couple of hours, he notes. Further, public health workers often have difficulty reaching preschool children in rural villages and ensuring that parents administer treatments on schedule. "That's a lot to ask of a mother with six kids who works hard just to do what she has to do every day," says Dawson.

Even successful treatment of trachoma is often followed by reinfection in villages where children's faces are seldom washed and flies swarm about their eyes, Dawson says.

Any long-term success against trachoma, he emphasizes, must combine antibiotic treatment with educational programs to improve cleanliness in young children and help prevent reinfection.